

**PEMA-PVC-LiBF₄-SiO₂ (15 μm) POLYMER ELECTROLYTES: IONIC
CONDUCTIVITY STUDIES**

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**FINAL YEAR PROJECT REPORT SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF BACHELOR OF SCIENCE (HONS.) PHYSICS
IN THE FACULTY OF APPLIED SCIENCES
UNIVERSITI TEKNOLOGI MARA.**

MAY 2010

This final Year Project Report entitled “PEMA-PVC-LiBF₄-SiO₂ (15 μm) POLYMER ELECTROLYTES: IONIC CONDUCTIVITY STUDIES” was submitted by Rompen Anak Bajing, in partial fulfillment for the degree of Bachelor of Science (Hons.) Physics, in the Faculty of Applied Sciences, and was approved by:



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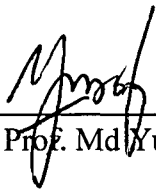
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ACKNOWLEDGEMENTS

First and foremost, great thanks to God the Almighty for giving me the strength and guidance in completing this thesis entitled “**PEMA-PVC-LiBF₄-SiO₂ (15µm) POLYMER ELECTROLYTES: IONIC CONDUCTIVITY STUDIES**”. This thesis could not have been completed without the support and contributions of many people.

I would like to express my sincere gratitude to my supervisor, PM Dr. Ri Hanum Yahaya Subban. She was so kind and helpful by ensuring that this thesis be completed on time. She guided me from the very beginning of the semester. Thank you for imparting some valuable inputs and ideas. Also thanks are due to my co-supervisor for her contributions.

Next, I would like to express my thanks to my senior, Nor Azwa Zakaria. She was very helpful and was always available whenever I need help. Also, I would like to thank my project members, Fariah Isthain and Noor Zarina Baderisham for their support and contribution.

Thanks are also due to my family who supported me a lot especially financially and morally.

Last but not least, I once again want to express my gratitude and appreciation to all parties who are involved directly or indirectly in carrying out this work.

Thank you once again.

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ABSTRACT

PEMA-PVC based polymer blend electrolytes are prepared by solution casting technique. PEMA is the host polymer and PVC is added to PEMA using different ratios. The solvent used is THF. LiBF_4 and SiO_2 as the salt and inorganic filler respectively are added to improve the ionic conductivity of PEMA-PVC based polymer blend electrolytes. The bulk resistances of the polymer system are determined by Impedance Spectroscopy technique. All the samples are characterized at room temperature for frequencies ranging from 1 KHz to 1 MHz. The thickness of polymer films and ionic conductivities are then calculated and reported.